

# iZotope Trash Delay for Wwise

#### Introduction

The iZotope Trash Delay effect for Wwise is a great way to add delay with some character to any audio. By using one of several different types of distorted delays including tape, tape/tube, analog, digital and lo-fi digital delays, it's possible to get a wide variety of unique and creative delay sounds.

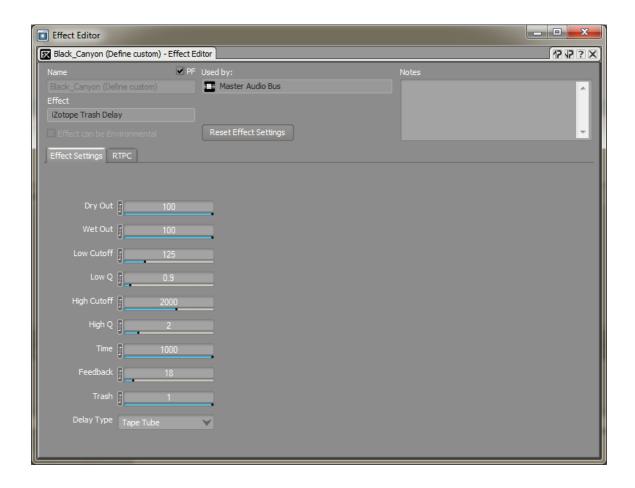


Figure 1 - iZotope Trash Delay



### **Delay Controls**

The main controls for Trash Delay are the *Time* and *Feedback* controls. The *Time* control determines how long after the dry signal the delayed signal plays (defined in milliseconds), while the *Feedback* control (%) adjusts the number of times and level at which the delayed signal repeats.



Figure 2 - Delay Controls

# **Filtering Controls**

There are also filter parameters for shaping the response of the delayed portion of the signal. The Low Cutoff, Low Q, High Cutoff, and High Q controls change how much of the low and high frequency content is present in the delayed signal (these only affect the delayed portion not the dry signal).

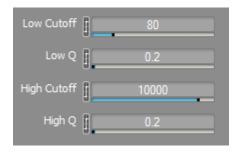


Figure 3 - Filter Controls



# **Delay Type and Character**

The truly unique character of the Trash Delay effect comes from the various delay types offered and the ability to vary the distortion on each. The *Delay Type* dropdown menu is used to select from six different delay types while the *Trash* slider is used to affect the character of each of those delays. For example, higher *Trash* values for Tape delays results in more saturation and higher *Trash* values for Lo-Fi Digital delays results in more bit truncation and aliasing.



Figure 4 - Delay Type

Delay Type	Description
Таре	A straight tape delay effect with saturation and wow/flutter.
Tape/Tube	A tape delay effect with additional tube saturation properties.
Analog	A lo-fi analog delay effect with smearing and analog degradation.
Lo-Fi Digital	A lo-fi digital delay effect similar to the first digital delay stomp boxes.
Broken Bit	A digital delay effect with infinite feedback on the lowest bit - similar to a faulty "stuck bit" delay.
Digital	For completeness, a pure, clean digital delay.



Interface Element	Description
Dry Out	The output gain of the dry/undelayed signal.
	Default value: 100
	Range: 0 to 100
	Units: %
Wet Out	The output gain of the wet/delayed signal.
	Default value: 0
	Range: 0 to 100
	Units: %
Low Cutoff	The Low Frequency Filter Cutoff for the delayed signal.
	Default value: 80
	Range: 20 to 20000
	Units: Hz
Low Q	The Q or Bandwidth for the Low Frequency filter of the
	delayed signal.
	Default value: 0.2
	Range: 0.2 to 12
	Units: None
High Cutoff	The High Frequency Filter Cutoff for the delayed signal.
	Default value: 10000
	Range: 20 to 20000
	Units: Hz
High Q	The Q or Bandwidth for the High Frequency filter of the
	delayed signal.
	Default value: 0.2
	Range: 0.2 to 12
	Units: None



Time	The delay time in milliseconds.
	Default value: 200
	Range: 10 to 1000
	Units: milliseconds
Feedback	The gain of the delay feedback. Higher values will increase
	the number of repeats, as well as their respective levels.
	Default value: 20
	Range: 0 to 200
	Units: %
Trash	The amount of degradation for the delay. For example, higher
	Trash values for tape delays results in more saturation.
	Higher Trash values for lo-fi digital delays results in more bit
	truncation and aliasing.
	Default value: 0.25
	Range: 0 to 1
	Units: None
Delay Type	Selects the type of Delay used. The delay choices are:
	Tape
	Tape Tube
	Analog
	Lo Fi Digital
	Broken Bit
	Digital